

**FUTURE FISHERIES IMPROVEMENT PROGRAM
GRANT APPLICATION**

(please fill in the highlighted areas)

I. APPLICANT INFORMATION

A. Applicant Name: Jim Magee - USFWS Montana Partners for Fish and Wildlife Program

B. Mailing Address: 420 Barrett Street

C. City: Dillon State: MT Zip: 59725

Telephone: (406) 683-3893

D. Contact Person: Same

Address if different from Applicant:

City: State: Zip:

Telephone:

E. Landowner and/or Lessee Name
(if other than Applicant): Landowner: Hirschy Livestock

Mailing Address: Fred Hirschy General Delivery

City: Wisdom State: MT Zip: 59725

Telephone: (406) 660-3500

II. PROJECT INFORMATION*

A. Project Name: Swamp Creek Siphon Project

River, stream, or lake: Swamp Creek (Big Hole Watershed)

Location: Township 2S Range 16 W Section 36

County: Beaverhead County

B. Purpose of Project:

The Swamp Creek Siphon Project will improve connectivity, stream flows, and access to cold water habitats and reduce entrainment (loss of fish in irrigation systems) for native and sportfish species. Swamp Creek is an important tributary for the Big Hole Arctic grayling and one of the most productive spawning tributaries in the upper Big Hole drainage. Currently, an irrigation canal intersects Swamp Creek, capturing and diverting Swamp Creek water eliminating connectivity (Figure 1 and 2). A siphon will be installed to transport canal water underneath Swamp Creek, which will improve instream flows six miles downstream of the canal and provide fish passage to access 12 stream miles upstream of the canal.

The project will also improve irrigation efficiency and management on a large irrigation canal in the upper Big Hole watershed. The siphon will be designed and sized to transport the landowner's water rights downstream for irrigation. A diversion, screw gate, measuring device and fish ladder will also be installed in Swamp Creek as part of this project to provide the water-user the infrastructure to utilize their Swamp Creek water right.

C. Brief Project Description:

The conceptual drawing (Figure 3) provides a preliminary illustration of the project. The siphon will be designed for the capacity of the water rights (Figure 4 and 5). Overland flow from irrigation, precipitation or flooding will be diverted into Swamp Creek through an overflow weir. The siphon will be a High Density Polyethylene (HDPE) Pipe (63" x 150 linear feet) and canal banks will be heightened upstream to accommodate water backed up at the siphon. A trash rack will be installed on the upstream end of the siphon to prevent large debris from entering the siphon. The water user also has a water right in Swamp Creek that is diverted into the canal and used downstream. A pin and plank diversion and screwgate will be installed upstream of the siphon in Swamp Creek to divert water from Swamp Creek into the canal. A denil type fish ladder will be installed in the diversion and a measuring device will be installed (Figure 6)

D. Length of stream or size of lake that will be treated:

The siphon will be 150 feet in length. A new stream channel approximately 100 feet in length will be constructed over the siphon. The siphon will eliminate a fish passage barrier and open 12 miles of upstream habitat.

Project Budget:

Task	Cost
Design	\$55,556 Secured
Construction	\$250,000
Contingency (20 %)	\$50,000
Oversight	\$20,000
Administration	\$10,000 (BCD-RRGL)
E. Total	\$385,556

Grant Request (Dollars):**\$ \$30,000**

Contribution by Applicant (Dollars): \$ \$ 5,000 (Secured)

In-kind \$ 0

(salaries of government employees are not considered as matching contributions)

Contribution from other Sources (Dollars): \$ \$350,556

In-kind \$ 0

Proposed Project Funding

Funding Source (grant/loan or cash reserves)	Amount	Committed/ Uncommitted
RRGL Grant	\$ 100,000	Uncommitted (Applied)
Wildlife Conservation Society -Climate Adaption Grant	\$ 99,000	Uncommitted (Applied)
USFWS (Partners for Fish and Wildlife Program)	\$ 5,000	Committed
USFWS National Fish Passage Program	\$96,000	Uncommitted
FFIP	\$ 30,000	Uncommitted (Applied)
FWP/SWG	\$ 55,566	Committed
TOTAL	\$ 385,556	

(attach verification - See page 2 budget template)**Total Project Cost:****\$ \$385,556**

F. Attach itemized (line item) budget – see template

- G. Attach specific project plans, detailed sketches, plan views, photographs, maps, evidence of landowner consent, evidence of public support, and/or other information necessary to evaluate the merits of the project. If project involves water leasing or water salvage complete supplemental questionnaire ([fwp.mt.gov/habitat/future fisheries/supplement2.doc](http://fwp.mt.gov/habitat/future_fisheries/supplement2.doc)).

Please find Attached:

Figure 1: Project Location

Figure 2: Current Condition

Figure 3. Conceptual Plan

Figure 4, 5, 6: Similar infrastructure designed for this project

Appendix A: Budget Tables and Project Schedule

Appendix B: Preliminary Design Drawings (nine) (Entire Preliminary Design will be include as a pdf file)

Appendix C: Letters of support From:

- 1) The Nature Conservancy
- 2) Beaverhead County Commissioners
- 3) Big Hole River Foundation
- 4) Big Hole Watershed Committee
- 5) Arctic Grayling recovery Program
- 6) USFWS Partner for Fish and Wildlife Program
- 7) Department of Natural Resource and Conservation
- 8) Montana Fish, Wildlife & Parks
- 9) Montana Trout Unlimited
- 10) Beaverhead Conservation District

Attach land management and maintenance plans that will ensure protection of the reclaimed area.

The landowner and water right holder of this project are enrolled in the Big Hole Arctic Grayling CCAA Program. The landowner and water right holders are in the process of developing a site-specific conservation plan (SSP) that will benefit Arctic grayling. The SSP is for ten years. The conservation actions associated with this project will be included in the landowner and water right holders SSP. Conservation measures include improving instream flows, developing a riparian management conservation plan, removing barriers to fish passage and reducing or eliminating entrainment .

H.

PROJECT BENEFITS*

A. What species of fish will benefit from this project?:

Arctic grayling, mountain whitefish, burbot, longnose dace, longnose suckers, common suckers, and mottled sculpins and sportfish species (primarily eastern brook trout).

B. How will the project protect or enhance wild fish habitat?:

This project will have substantial benefits to the conservation and management of wild, native and sportfish populations and for Arctic grayling conservation. Swamp Creek is one of the most productive tributaries for Arctic grayling in the Big Hole drainage. Currently an irrigation canal that intersects Swamp Creek is a barrier to fish movement. Removing the barrier will provide access for fish to six miles of Swamp Creek and six miles of Moose Creek upstream of the canal (Figure 1). Arctic grayling utilize reaches in Swamp Creek just downstream of the canal but cannot navigate the diversion in Swamp Creek at the intersection with the canal during irrigation season (Figure 2). After irrigation season, fish may be able to navigate through the diversion but have the potential of being entrained in the canal. Additionally, any fish moving downstream in Swamp Creek are highly likely to be entrained in the canal during irrigation season. The siphon will also improve instream flows downstream of the canal. An over-flow weir located just upstream of the siphon will divert flows greater than the siphon capacity (equal to water rights) into Swamp Creek. Increased flows in Swamp Creek will improve sediment transport, channel maintenance, spawning habitat and aquatic habitat quality.

C. Will the project improve fish populations and/or fishing? To what extent?:

Project will improve fish populations by providing fish access to additional habitats, improving instream flows and decreasing entrainment into an irrigation canal.

D. Will the project increase public fishing opportunity for wild fish and, if so, how?:

Anglers will benefit from project by improved abundance and distribution of native and sport fish species by providing connectivity to additional habitats, improved instream flows and decreased entrainment of fish into an irrigation canal.

E. If the project requires maintenance, what is your time commitment to this project?:

No substantial additional costs are anticipated after project completion. The water users will be responsible for daily operation and minor maintenance. Agencies (FWP, DNRC and USFWS) will be responsible for maintaining the fish ladder. The agencies also agree to seek funding for repair in the event of catastrophic damage from natural causes (ice jam, earth quake etc...). However, the agencies cannot guarantee that funding will be available.

F. What was the cause of habitat degradation in the area of this project and how will the project correct the cause?:

An irrigation canal that intersects Swamp Creek has created a fish passage barrier, limited control of irrigation water and increased potential for fish to be entrained into the canal. This project will siphon canal water under Swamp Creek and remove fish passage barrier, improve instream flows and decrease potential for fish to be entrained in the canal.

G.

Public Benefits. There are numerous Public benefits to this project:

- 1) Conservation of Arctic grayling and native and sportfish populations: Swamp Creek is one of the most productive tributaries for Arctic grayling in the Big Hole drainage. Installing the siphon will remove a fish passage barrier, improve instream flows and decrease entrainment that will provide benefits not only to Arctic grayling but other native species (mountain whitefish, burbot, longnose dace, longnose suckers, common suckers, and mottled sculpins) and sportfish species (primarily eastern brook trout).
- 2) Improved irrigation efficiency: Irrigated hay and livestock production are vital economic components in the Big Hole watershed and Southwest Montana. The canal and Swamp Creek combined provide irrigation water to 3 landowners and 6,434 acres. Installing the siphon in the canal and a new diversion, headgate, and measuring device in Swamp Creek will ensure water supply is conveyed downstream to enable efficient use, measurement, and transport of irrigation water to hay fields and pastures. Providing the infrastructure that allows landowners to control and measure irrigation water will provide benefits to landowners to manage flows, facilitate instream flow conservation programs and reduced maintenance costs. Viable ranching operations are essential to the community and local economy.

3) Public and Community Benefits:

This project has a broad range of support and is part of the programmatic Big Hole Arctic Grayling Candidate Conservation Agreement with Assurances program (CCAA). The Big Hole Arctic grayling CCAA currently has 33 landowners and 158,000 acres enrolled and is one of the largest CCAA programs, in terms of participants, in the country. Over the past 5 years Big Hole landowners have implemented hundreds of projects that address conservation needs for Arctic grayling that 1) improve instream flows, 2) improve riparian and channel habitat, 3) eliminate barriers to fish movement and 4) reduce entrainment into irrigation systems. The Big Hole Arctic grayling CCAA has been a tremendous community conservation effort made possible by the many partnerships that support and fund projects. The partnerships include agency, local conservation groups and other diverse stake holders including; The Big Hole Watershed Committee, the Arctic Grayling Recovery Program, the Big Hole River Foundation, The Nature Conservancy and Trout Unlimited. These groups have worked closely with Montana Fish, Wildlife & Parks, Montana Department of Natural Resource and Conservation, USDA Natural Resources Conservation Service, USFWS Montana Partners for Fish and Wildlife Program and the Bureau of Land Management to implement the CCAA Program. Proactive conservation projects that benefit Arctic grayling and the Big Hole watershed will also benefit the ranching community. Improving irrigation infrastructure, installing measuring devices, fish ladders, stock wells and stream restoration. projects that address Arctic grayling needs also provide landowners infrastructure and flexibility that is essential to their ranching and farming operations. The Big Hole Arctic grayling CCAA is a unique grassroots collaboration that benefits local community and the renewable resources of southwest Montana.

4) Natural Resource Recreation:

The proposed project will enhance natural resource based recreation in Swamp Creek and the Big Hole River through improved habitat and fisheries access to additional habitats that enhance fish population abundance and provide opportunities to anglers and wildlife enthusiasts.

H. Will the project interfere with water or property rights of adjacent landowners? (explain):

No. Project is designed to ensure all water rights holders can utilize their water right.

I. Will the project result in the development of commercial recreational use on the site?: (explain):

No

J. Is this project associated with the reclamation of past mining activity?: NO

Each approved project sponsor must enter into a written agreement with the Department specifying terms and duration of the project.

IV. AUTHORIZING STATEMENT

I (we) hereby declare that the information and all statements to this application are true, complete, and accurate to the best of my (our) knowledge and that the project or activity complies with rules of the Future Fisheries Improvement Program.

Applicant Signature:

Date:

Sponsor (if applicable):

***Highlighted boxes will automatically expand.**

Mail To:

**Montana Fish, Wildlife & Parks
Habitat Protection Bureau
PO Box 200701
Helena, MT 59620-0701**

Incomplete or late applications will be returned to applicant.

Applications may be rejected if this form is modified.

*****Applications may be submitted at anytime, but must be received by the Future Fisheries Program office in Helena before December 1 and June 1 of each year to be considered for the subsequent funding period.*****

